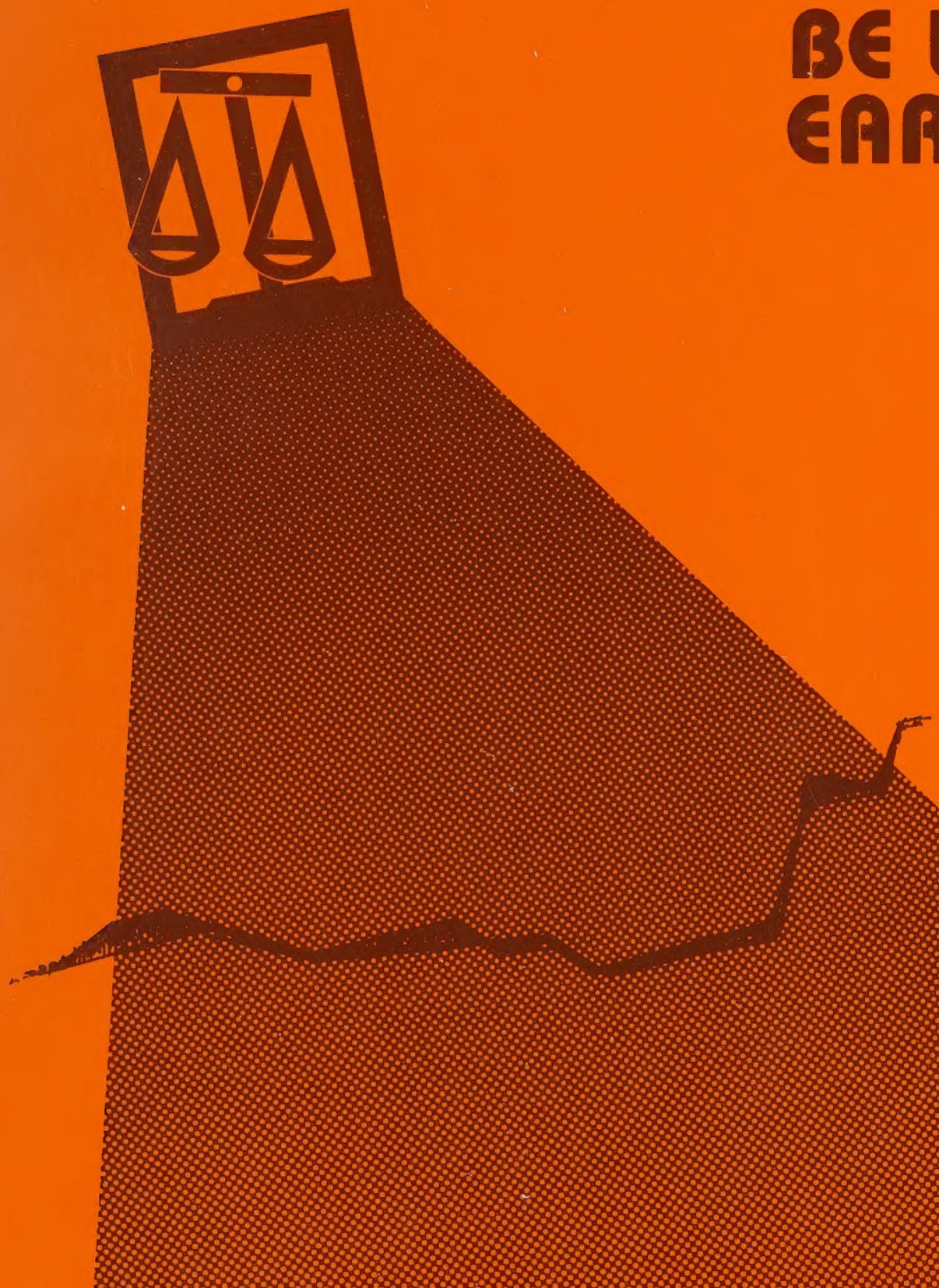

WILL LOCAL GOVERNMENT BE LIABLE FOR EARTHQUAKE LOSSES?

What Cities and Counties Should Know About Earthquake Hazards and Local Government Liability

By Terry Margerum

January 1979

ASSOCIATION
OF BAY AREA
GOVERNMENTS

ABAG

Earthquake Liability Study

Report Credits

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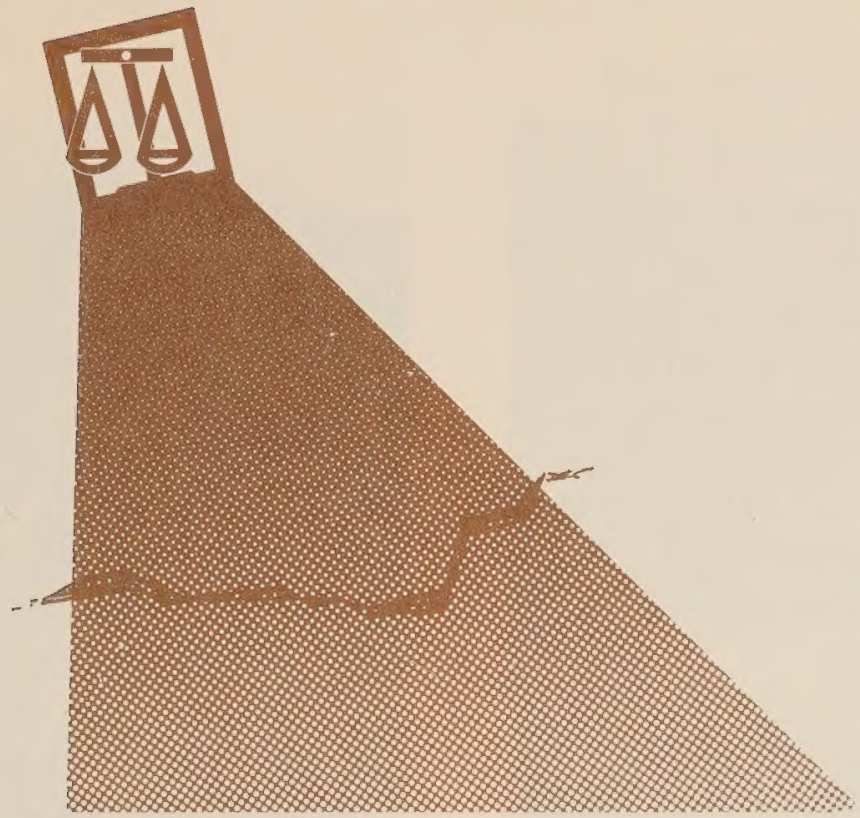


Table of Contents

The Basic Question

Could a local government be held liable for injuries or losses in an earthquake which are caused (or made more likely) by its failure to eliminate a known hazard? For example, if people are injured when an old county hospital collapses in an earthquake, could the county be held liable if the injuried parties proved the county knew that the old hospital would be unsafe in a foreseeable earthquake and did nothing to reduce the danger?

Not so long ago such questions were never asked. Earthquakes and their effects were considered "acts of God," and governments were protected by so-called "sovereign immunity," a legal doctrine inherited from the English Common Law. Things have changed, and it is now quite possible that a local government could be liable in the situation described above.

Photo courtesy of Ziony, U.S. Geological Survey.

Some Definitions

Liability

Liability is simply responsibility for an action, event or procedure. If a city is ''liable'' for something, it can be sued if someone or something is hurt as a result of the mistake or other wrongful act. The official or city employee, or the city can be forced to pay damages if a court or jury agrees with a plaintiff.

Liability results from the commission of a tort or other action governed by civil or criminal law or contract. A ''tort'' is a legal term derived from the French word meaning ''wrong''. In the law, an action resulting in some kind of injury which is not governed by civil or criminal law or the terms of a contract is usually classified as a tort. Torts involve all forms of injury — physical, economic, emotional, intangible — and are usually the result of negligence.

Liability arises from several sources. The most familiar are common law, Federal and state constitutions, and statutory law. Common law is what has evolved by judicial precedent in the Anglo/American legal system. Most of the current concepts of tort liability, for example, are rooted in the common law. Constitutions guarantee basic individual rights, and public officials and private citizens bear a liability for any abrogation of these guarantees. Statutory law may spell out other forms of liability or elaborate on common law precedent.

Source: National League of Cities.

Injury

In this report, **injury** means physical injury or death. **Damages** refers to property damage, economic loss, etc.

Earthquake Hazards

Earthquake hazards can be divided into three categories:

1 — **natural hazards** These include active faults, landslide areas, weak soils (e.g., bayfill). These situations become hazardous due to the uses to which the land is put.

SAN ANDREAS FAULT

". . . situations become hazardous due to the uses to which the land is put."

Photo courtesy of Wallace, U.S. Geological Survey.

2 — **structural hazards** These include buildings and other structures that have not been designed to withstand foreseeable earthquakes.

3 — **service hazards** These include emergency services such as fire protection, police, medical, and disaster planning personnel which are inadequate for dealing with expected or foreseeable disasters.

Why Liability for Earthquake Hazards is a Potential Problem

Several factors make it possible that a local government would be held liable for injury or damages caused by its alleged failure to reduce earthquake hazards.

Legal Facts of Life

- Liability claims are increasing in frequency and visibility, especially against government. A task force of *California's Commission on Government Reform* pointed out that of all the ways government has grown in recent years, none has been more rapid than its growth as a target for claims and lawsuits. Anxious plaintiffs rush to court at the slightest provocation. The *California Citizens' Commission on Tort Reform* found that the number of non-auto tort claims filed is growing 7-15 times as fast as the State's population. In Los Angeles County, for example, the number of claims filed against the County went from 1,853 in 1975 to 2,863 in 1977.

- In recent decades there has been a trend toward making government more liable and less immune. This is evident in both legislative and judicial decisions. Chart 1 chronicles this trend in California. Moreover, some recent court decisions seem more appropriate in a T.V. sit-com than a courtroom. Their consquences, however,

- Increasingly the courts are shifting private losses to the public by going for government's so-called "deep pocket" even where government's involvement in the injury was passive or minimal.

The Disappearing "Act of God"

An increasing number of courts are holding governmental bodies financially responsible for damages suffered by private individuals in natural disasters. These decisions reflect a growing willingness of the courts to disregard the time-honored agreement that injuries resulting from natural disasters are unavoidable (and liability-free) "acts of God." This change in judicial attitude probably results from several technological changes which reduce the credibility of the "act of God" defense. Thus, while the earthquake itself remains an act of God, its effects on people and structures are foreseeable — for several reasons:

- **we know how to build** Advances in structural engineering and construction techniques have made it possible to design new structures to be relatively earthquake-resistant, and to modify old buildings so that they don't pose serious hazards to life.

- **we know where not to build** Improved geological information often makes it possible to avoid hazardous areas, e.g., fault zones, landslide areas, poor soil conditions, etc.

- **earthquake prediction** Before the end of the century this developing science may provide practical warnings of impending quakes.

"We know where not to build." Photo courtesy of Oakland Tribune.

Chart-1

Selected Major Judicial Decisions Affecting California Tort Doctrines, 1960-1977

1961 – Abrogation of the doctrine of **sovereign immunity,** i.e., the presumption that public entities could not be sued in tort.

1968 – Restriction of the **statutory immunity** of public entities against suits arising from their ''discretionary'' acts. The restriction provided immunity only for acts of a ''planning'' rather than an ''operational'' nature.

1970 – Further narrowing of the **statutory immunity** of public entities against suit. A specific case gave immunity for a decision to parole but **not** for a decision whether to **warn** prospective foster parents of a parolee's dangerous tendencies.

1971 – Extension of the **liability** of a local government to include hazards entirely contained on adjacent private property.

1972 – Further narrowing of the **statutory immunity** of public entities against suits for defective design of public facilities. Liability was imposed for **failure to redesign** in the event of **changed conditions.**

1975 – Further narrowing of the **statutory immunity** of public entities against suits arising out of a **licensing** decision.

1976 – Redefinition of **statutory immunity** of public entities against suit for **discretionary** actions. A state-employed psychiatrist's decision not to warn a third party of danger from his patient was found **not** to be covered by the immunity.

Source: National League of Cities.

Public Awareness and Expectations

Both the media and the public are becoming more aware of government's role in reducing the consequences of natural disasters — and expecting government to fulfill that role responsibly. For example, in the 1978 mudslides in Southern California, people asked why the government had allowed developers to build and sell homes in such potentially hazardous areas, places with a clear history of landsliding. As Los Angeles County Supervisor Baxter Ward put it: "The residents of the county are appalled that permits are issued on hillside properties that are unsafe (in severe rainstorms). The public thinks, justifiably or not, that there is some implied guarantee that government knows what it is doing."

Inherent Vulnerability of Local Governments

In addition to these trends, there is the constant fact that cities and counties are inherently vulnerable to liability because of the many services they provide. They adopt and enforce building codes, land use and zoning ordinances; they prepare disaster and emergency plans; they build and maintain numerous facilities of their own; and they are responsible for keeping public areas — parks, sidewalks, streets, etc. — free and clear of hazards. Local government can shirk neither these duties nor the potential liability which accompanies them.

Purpose of this report

At the request of its member governments, ABAG spent most of 1978 examining local government's potential liability related to earthquake hazards. The purpose of the study and of this report are:

1 – To clarify the nature and extent of local government's potential liability;

2 – To advise local government how to cope with that liability;

3 – To recommend ways tort law could be changed to encourage local governments to reduce earthquake hazards without increasing their liability.

The study, which was financed by a National Science Foundation grant, was intended for use not only by California but by all earthquake-prone states.

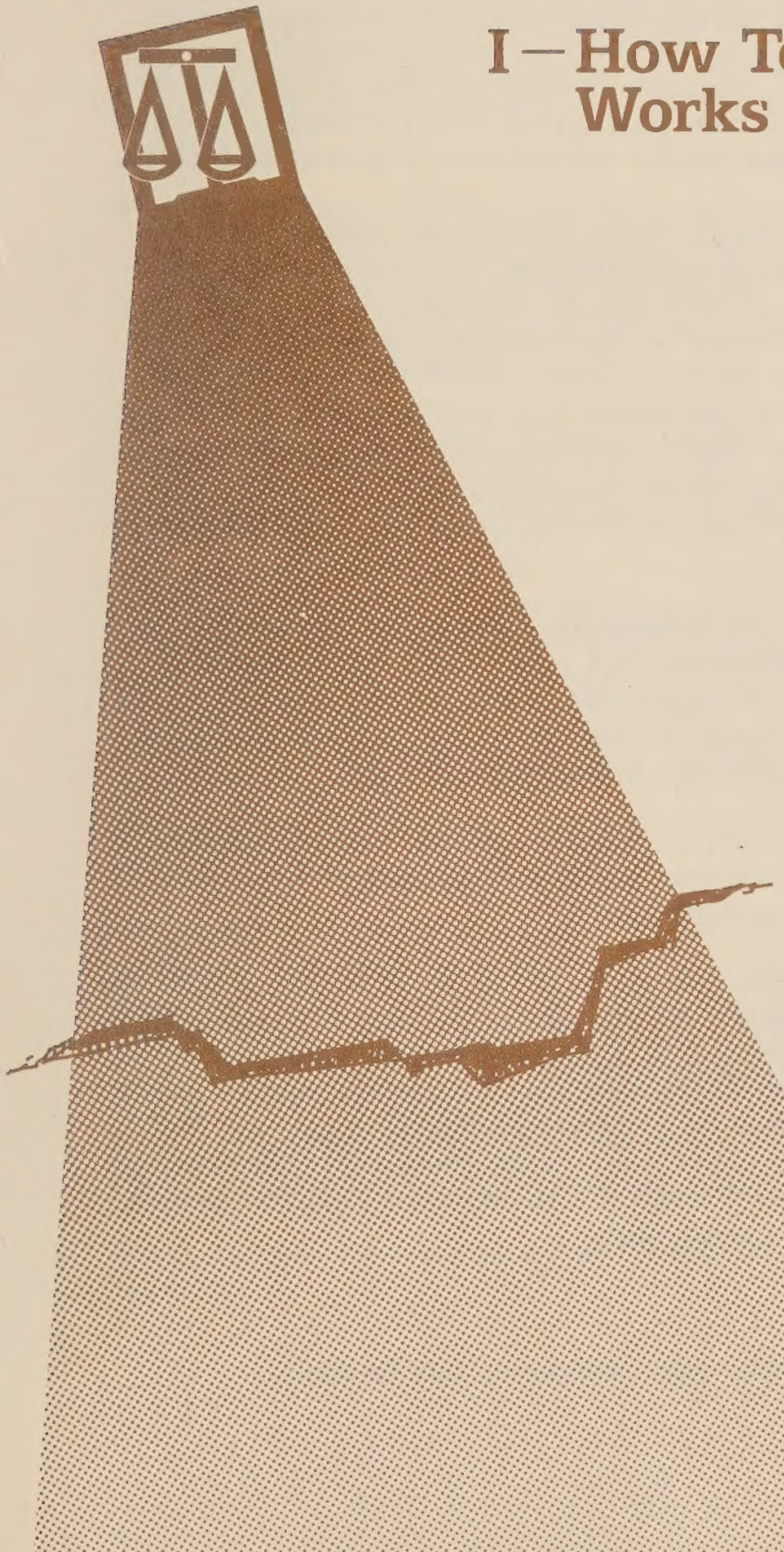
The report is divided into the following major sections:

I – How Tort Law Works

II – How Tort Law Affects Local Government Decisions About Earthquake Hazards

III – Potential Liability: What It Is and How to Minimize It

IV – Making the Law Work Better



I—How Tort Law Works

Some History

The law has always treated the liability of governments as a special case requiring special rules. Until recent decades the British tradition of no liability for government prevailed in most states. This doctrine of "sovereign immunity" was based on two simple beliefs: the King (the judge) could not be sued in **his own** court and the King (the law-maker) could do no wrong. By the early 20th century this rule of absolute immunity for governments was replaced by the "traditional rule" which distinguishes between a jurisdiction's "governmental" functions (e.g., police and fire) and its "proprietary" functions (e.g., running the public utility company). Immunity was provided for the former, but in the latter activities governments were treated like any private party.

While this dichotomy seemed reasonable, it produced some bizarre results. For example, if a pedestrian were hit by a car owned by the public utility he could sue the city; if the car was driven negligently by a policeman, the city would be completely immune. Such anomalies led to further changes in the law. In about a dozen states this traditional rule, as modified by specific statutes and case precedents, still holds. The other states (including the four[1] emphasized in this study) have abandoned the traditional rule and follow more contemporary standards established by combinations of statutes and court decisions. These modern rules for determining liability depend more or less on three different factors:

- the nature of the act or decision;
- the nature of the decision-maker; and
- the nature of the circumstances.

Basic Structure and Principles of Modern Tort Law

Through most of the 20th century tort law was understood as a set of legal rules justified primarily in terms of common sense moral judgments. "If my negligent behavior causes you some injury or harm, I should compensate you." In the past decade legal experts have perceived tort law less in this common sense way and more as a systematic effort to deter negligence, prevent accidents, and promote safety.

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[1]The four states were Alaska, California, New York and Washington

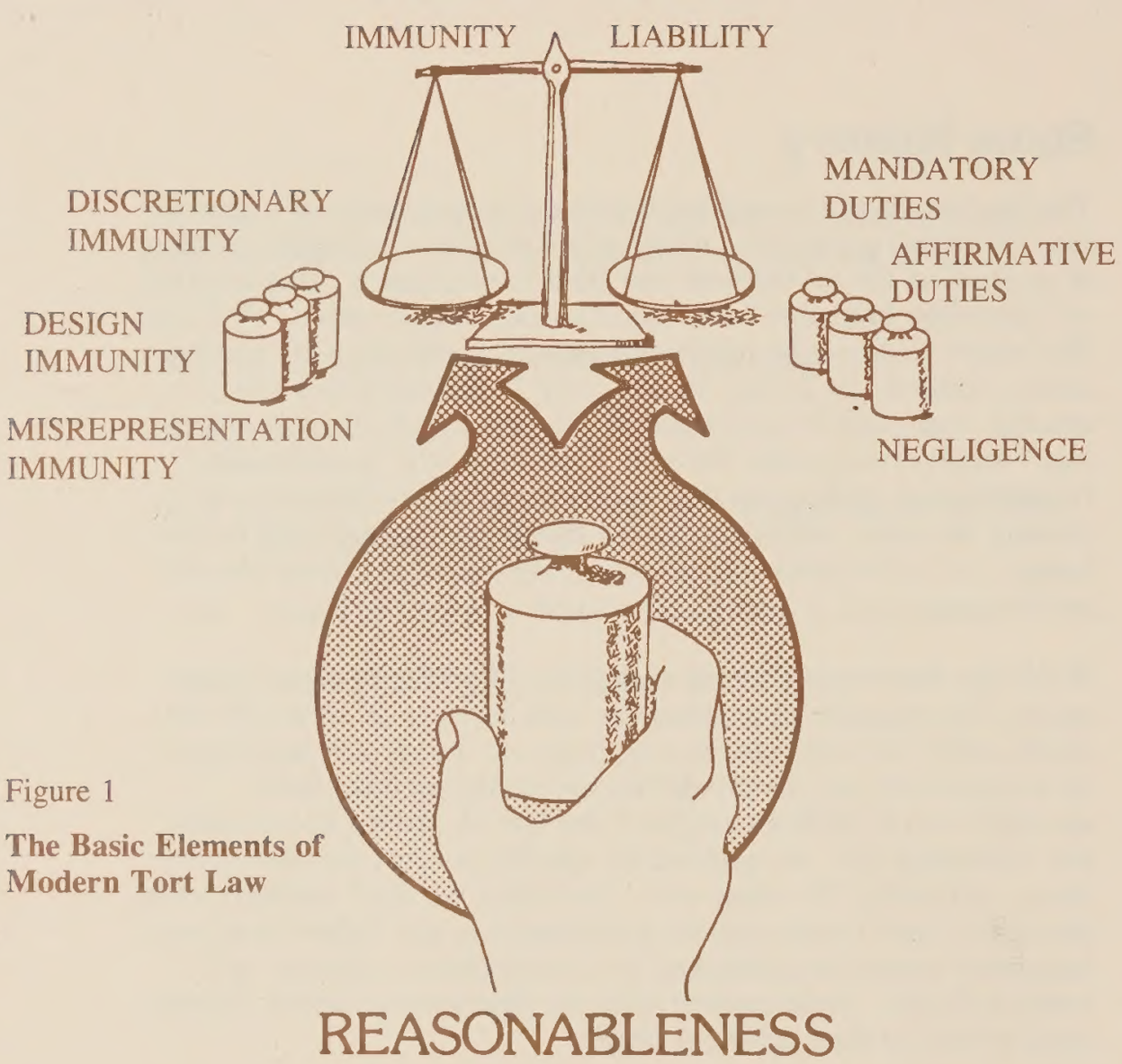

Figure 1

The Basic Elements of Modern Tort Law

Conduct is considered negligent if the magnitude of its risk is greater than the cost of preventing the risk. This basic rule of **negligence liability** predominates in most states and is intended to encourage behavior which is beneficial to society as a whole:

Basically, local governments can be liable in the same ways as private parties. They can be **vicariously** liable (for acts of their employees) or **directly** liable (for their own acts). In some states, like California, this general liability is supplemented by statutes defining specific instances of liability, e.g., for dangerous conditions of public property or for failure to comply with a mandatory duty.

To balance these liabilities, areas of substantial immunity are provided, the most important being immunity for **"discretionary"** acts, which protects **"high-level policy and planning"** decisions. In addition to this general immunity some states have enacted additional specific immunities, e.g., immunity for injuries caused by negligent building inspections, immunity for failure to adopt or enforce a law, etc. The legal concepts and principles of most relevance to potential liability for earthquake hazards are discussed in greater depth below.

Reasonableness Overriding these liabilities and immunities is the fundamental criterion of **reasonableness** which can supersede statutory rules of liability or immunity. For example, the court may deny the discretionary immunity because the particular decision — while discretionary — was not reasonable in light of the facts. The court could also forgive non-compliance with a statutory duty if it thought the local government's actions were reasonable. Reasonableness is determined by the circumstances — the foreseeability of the injury, the apparent magnitude of the risk and the relative costs and benefits of action vs. inaction.

Knowledge (actual and constructive notice) An important factor in determining the reasonableness of a defendant's action is what he knew (actual notice) or should have known (constructive notice). In some states these concepts are codified in law, but even where they aren't they remain important in determining liability.

Duty Duty implies a responsibility to perform. It can be imposed by State or Federal government (statutory or mandatory[2] duty) or by a local government's own enactment[3].

Affirmative duty The general rule of tort law is that one is liable for **causing** harm to another. The converse is that there is no liability for not preventing the harm. This distinction between **causing** harm and merely **failing to prevent** it has deep roots in tort law. In other words, there is no "affirmative duty" to rescue or render assistance. This concept is especially critical vis-a-vis governmental liability because many suits against government revolve around its failing to prevent rather than actually causing harm.

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[2] Mandatory is the term in California law.

[3] This varies by State. In California there is still some debate over whether a local government can create a mandatory duty for itself.

However, this general rule of no affirmative duty has some important exceptions:

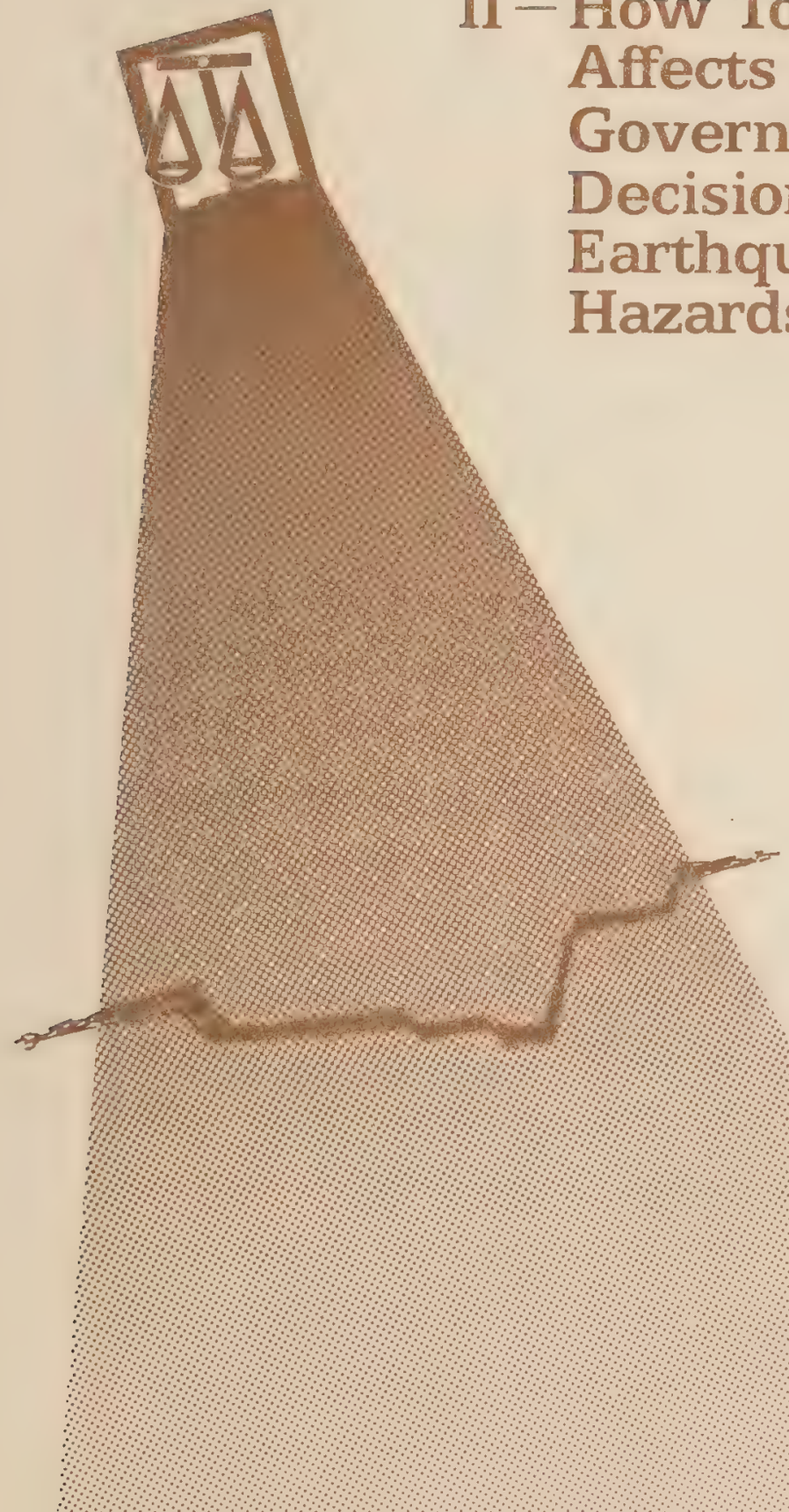
- If there is a special relationship between defendant and plaintiff (e.g., parent and child) there could be an affirmative duty. Courts have consistently ruled that there is no comparable special relationship between a local goverment and its citizens or the general public.

- A second, more relevant, exception is the **"undertaking"** rule. A local government could be liable if, in voluntarily performing some function, it fails to exercise due care (thus causing or increasing the chances of harm), or if harm is suffered because people **relied** on the undertaking.

Discretionary Immunity This is the most encompassing and important immunity provided local goverment. It exists by statute or case law in most states. The discretionary immunity derives from the "separation of powers" doctrine. Plainly stated, decisions made by the legislative or executive branches should not be subject to judicial review unless they violate some law. The discretionary immunity is designed to protect high-level policy and planning decisions (as opposed to operational, day-to-day implementation activities conducted by lower level staff — "ministerial decisions"). This distinction is not precise and its generality has led to considerable confusion and uncertainty in practice. Most local officials surveyed by ABAG said that, as currently defined, the discretionary immunity is not a useful guide to them.

One could argue that for a long time tort law was excessively protective of government, and that it clearly worked to the government's advantage. Consequently, an individual who was victimized by government's negligence or incompetence was less likely to be justly compensated than if he had been wronged by another private individual. This imbalance no longer exists. In fact, the pendulum may have swung too far the other way, with governments being held liable for things beyond their practical or financial capability.

These changes have not been without impact on local government's behavior.



II — How Tort Law Affects Local Government Decisions About Earthquake Hazards

In discussions with cities and counties, ABAG noted three major concerns about the impact of liability on their decisions about earthquake hazards:

- uncertainty and unpredictability of tort liability rules;
- legal disincentives to discovering and reducing hazards;
- fear that local government was unaware of the issue because they hadn't thought how recent public liability trends could be relevant to earthquake hazard reduction.

The Problem of Uncertainty

In ABAG's survey of nearly 400 local officials in 88 jurisdictions in four states[4], 96% of the respondents felt that tort liability rules were extremely uncertain and unpredictable. The survey also asked their opinion about local government liability in five specific situations. The divergent responses to these hypothetical cases reinforced their general perception of great uncertainty.
(See Chart 2.)

Other studies have documented this problem too. A recent report by the National League of Cities contended that "there is a need to clarify the scope of municipal liability — cities cannot operate in an environment devoid of guidelines."

In its final report, the *California Citizens' Commission on Tort Reform* concluded that "the level of uncertainty about current tort rules is now very high, and it is rising . . ." and that this "new crisis of uncertainty could be much deeper and potentially more destructive than any in this century."

There are several causes of this uncertainty:

1 — **lack of clarity in the law** In many areas of tort law there are significant ambiguities. For example, it is unclear whether or not a California local government would be liable if it issued a certificate of occupancy based on a negligently conducted building inspection. Uncertainties of this sort reduce the law's effectiveness in guiding conduct.

2 — **vagueness of certain tort concepts** The concepts of reasonableness and negligence are central to tort law. There is a

[4] The four states were Alaska, California, Utah and Washington

flexibility designed into them purposely. Overall this is probably desirable, but it does make their effective meaning (what constitutes ''reasonable'' behavior?) difficult to ascertain in specific cases.

3 — **unfamiliarity with tort law concepts** Most local government attorneys believe that local officials (elected and non-legal staff) do not understand tort law very well. For example, more than half of the attorneys said that local officials do not clearly understand the

Chart- 2

Responses to Perceived Liability in Two General Situations and Five Hypothetical Cases

	Could Definitely Be Held Liable	Could Probably Be Held Liable	Might Or Might Not Be Held Liable	Could Probably NOT Be Held Liable	Could Definitely NOT Be Held Liable
General Situation					
1 – Based on your knowledge of current law and recent court decisions, to what degree do you think local goverments in your state could be held liable for a negligent failure to reduce known earthquake hazards?	8.9%	20.5%	50.0%	18.9%	1.6%
2 – In your opinion, could local governments in your state be held liable for actions negligently taken or not taken pursuant to a state sanctioned earthquake prediction?	3.2	21.3	46.3	26.6	2.7
Hypothetical Case (would there be liability if):					
1 – A local government permits a high occupancy structure to be built near a known active fault without imposing special design requirements. An earthquake occurs, causing injury or loss of life in these structures.	14.7	46.3	27.9	11.1	0
2 A local government is aware of hazardous high occupancy buildings within its jurisdiction. It takes no steps to abate the hazards or to require structural reinforcement. An earthquake occurs, causing injury or loss of life in these structures.	10.5	34.2	33.7	21.1	0.5
3 A local government is aware of hazardous structures which adjoin a public right of way. An earthquake occurs, the structure falls onto the right of way, causing injury or loss of life to people using the right of way.	5.3	35.4	40.7	18.5	0
4 – A local government is aware that one of its buildings (e.g., hospital or jail) is built near a known active fault and does nothing to abate hazards, require structural reinforcement or to relocate the building. An earthquake occurs, causing injury or loss of life in the structure.	15.9	47.1	25.4	11.6	0
5 An earthquake causes injury or loss of life in structures which have been inspected and found to meet the criteria of the Uniform Building Code. Later investigations establish that the inspections were negligently performed.	13.2	40.5	27.9	14.7	3.7

concept of discretionary immunity or the extent of statutory (or mandatory) duties.

4 — **judicial lawmaking** Some observers believe that tort law, even in states with detailed statutes, is made by the courts, not by the legislature. As evidence they cite the "erosions" and "misinterpretations" of the immunities set forth in the California Tort Claims Act.

5 — **unpredictable juries** Ad hoc lay juries are more likely than a professional judge to be swayed by emotional pleas and "hindsight" wisdom. Furthermore, many lawyers feel that tort case juries usually have a pro-plaintiff bias. Consequently the decisions of juries in such cases are often erratic. In a post-earthquake case, with people injured or dead, these jury characteristics could be particularly disadvantageous to local government defendants.

The net effect of this uncertainty is to reduce the impact of tort law on local government behavior. Clearly if local government does not understand the law or feels that the application of tort rules is unpredictable, then liability considerations will not be a significant factor in their decisions. Hence the accident prevention/safety promotion purposes of tort rules are frustrated.

The Problem of Disincentives

There are disincentives to earthquake hazard reduction in the current law. The following three are most important.

1 — **actual notice or knowledge rules** One of the features of tort law generally, and the California statute in particular, is that it imposes certain obligations on government once it has "actual knowledge" of a hazardous situation. While it makes sense not to hold government liable for a hazard of which it is unaware, the unintended incentive of this rule is to discourage local governments from aggressively seeking information through regular inspection programs or surveys of hazardous buildings. The effect of this is clearly evident in this excerpt from a response by San Diego Mayor Pete Wilson to a request by the American Institute of Architects (AIA) for city cooperation in a study of the seismic safety of private buildings in that city.

> I will be happy to provide official letters to building owners enlisting their cooperation; however, it is not considered appropriate at this time to deputize the (AIA) evaluators as (city) building inspectors since such status may impose an obligation to require correction of buildings determined to be unsafe.

2 — **mandatory (or obligatory) duty rules** The content and language of local ordinances can be legally relevant in tort liability cases. Local enactments may impose obligatory duties, for which noncompliance could result in liability. This fact gives local governments a considerable incentive to avoid adopting such ordinances or to word them so as to avoid creating a mandatory duty. In a recent Washington case[5] the state supreme court held Seattle liable for failure to enforce the building code because of a wording technicality in the code. Needless to say the city quickly changed the language, not only in that ordinance, but in many others also.

3 — **affirmative duty/undertaking rules** If a jurisdiction voluntarily undertakes to provide a certain service, it may increase its potential liability if it performs that service negligently or — after having caused people to **rely** on the service — fails to perform at all. This type of disincentive related to medical treatment in emergencies is what made necessary the enactment of the so-called "good-Samaritan" statutes protecting doctors and nurses. Examples of this were discovered during the project — provision of lifeguards on beaches, bike lanes programs, and most relevant, building inspections. In a case decided by the Alaska Supreme Court in 1976[6], governments were declared not liable for failing to conduct building inspections but were liable for failing to **follow up** on inspections findings. This ruling resulted in a severe reduction in inspection programs of state and local governments.[7]

Generally, our project's research confirmed the *Commission on Gov-*

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[5]*Halvorsen* v. *Dahl* (1978).

[6]*Adams* v. *State* (1976).

[7]The Alaska Legislature has since provided immunity for local jurisdictions in such circumstances. The State is still unprotected—and unenthusiastic about inspections.

ernment Reform's finding that "there is an increasing conservatism in the provision of many needed governmental services because of their liability potential."

All of these disincentives inhibit a major objective of tort law, namely to deter negligence, prevent accidents, and promote safety. Furthermore, as awareness of liability issues increases (which it will) the negative consequences of these disincentives will become greater too.

The problem of disincentives. ". . . it is not considered appropriate at this time to deputize . . . building inspectors since such status may impose an obligation to require correction of buildings determined to be unsafe." Photo courtesy of R Brown, U.S. Geological Survey.

Awareness of the Issue

Liability for failure to mitigate earthquake hazards has not occurred to most local governments as an issue. Only a third of the officials surveyed saw it as a possible problem. Therefore, potential liability has had little impact on their decisions about earthquake hazards thus far.

Important exceptions to this general finding are the jurisdictions which have recently experienced earthquakes. Most of them *have* thought about their potential liability and in some instances this has influenced their behavior. For example, concern over potential liability was one of a number of factors in Santa Rosa and Seattle decisions about rehabilitating old buildings in the downtown areas. Similar concerns slowed redevelopment of certain areas of Anchorage, Alaska for years — although now the city seems to be casting caution to the wind. This difference is explained by the fact that these earthquake-experienced jurisdictions are more aware of the hazards and have begun to regard them as they do other hazards. This conclusion is consistent with the survey finding that local attorneys think liability is a major factor in decisions about hazards in general (as opposed to earthquakes in particular).

While potential liability has had little impact on past decisions about earthquake hazards, it will become more important in the future, for several reasons:

- **increased awareness of earthquake hazards** Several recent studies have revealed increasing public and media concern about earthquake dangers, and a desire by the public for more information. The most publicized of these is the UCLA study of community response to the Palmdale Bulge (known in Palmdale as the Southern California Uplift!). The UCLA researchers discovered that over 65% of the people felt that neither government nor the media was giving them enough information about earthquake hazards.

- **increasing frequency and visibility of liability claims and suits** The problem of liability suits and natural hazards was even the subject of a *Time* magazine editorial on August 28, 1978 (see next page), documenting its transformation from an esoteric to fairly topical issue.

- **trend in local government toward self-insurance and risk management** A "virtual revolution" is occurring in local government, forced by constantly increasing insurance premiums. More and more cities and counties are self-insuring and instituting risk management programs. Both practices greatly increase awareness of liability considerations.

As potential liability for earthquake hazards becomes a more salient issue, the problems of uncertainty and disincentives will further distort and inhibit the purposes of the tort law. The net effect could be that laws designed to promote safety actually discourage local governments from serious efforts to reduce earthquake hazards.

Of Hazards, Risks and Culprits

Lightning struck two young men visiting Sequoia National Park in 1975, killing one and damaging the other's nervous system. The tragedy would seem to be an ugly triumph of miscreant weather and bad luck, yet a pending lawsuit against the National Park Service demands "no less than a million" for the disabled survivor and $1,606,645 for his late companion's family. The plaintiffs' argument: the park management negligently failed to warn the victims against standing where lightning might strike. The most amazing thing about the plaintiffs' position is that it is not at all unusual.

Today any mishap, no matter how fluky, can wind up in court. Take the case of the woman who collected $50,000 damages from San Francisco with the contention that her fall against a pole in a runaway cable car transformed her into a nymphomaniac. Or the pedestrian who as she crossed Chicago's Sears Tower plaza, suffered a broken jaw when the wind toppled her against a guard rail. She recently filed a $250,000 suit against the architects and manager of the building. Her argument: the structure's design increased wind velocities in the area; moreover, the management was negligent in failing, in a period of hazardous winds, to prohibit her from crossing the plaza.

The attitude that gave rise to these suits is showing itself more and more wherever Americans venture risks. That means everywhere because the world remains strewn with invisible banana peels and eldritch hazards. "People now feel they have the right to legal redress if anyone or anything imposes upon them and interferes with their ability to enjoy life," says Chicago Lawyer Philip Corboy, whose firm is prosecuting the case against Sears. This "I'm entitled" spirit is spreading so that it is time to wonder: Is there any limit at all to the world's liability for an individual's risk? Can there be a really risk-free society?

Humans, true, have tried to evade or minimize risk ever since man first ducked into a cave to elude the sabertooth. Ancient Babylonia invented marine insurance, but notoriously litigious Americans have always wanted more than mere insurance. As soon as the automobile became popular, the motoring public began to develop what San Francisco Liability Lawyer Scott Conley calls the belief that "there must be a pot of gold at the end of every whiplash." Now the old litigious spirit has become almost a reflex. Malpractice suits against doctors are epidemic. The volume of damage suits, doubling in some jurisdictions in the past ten to 15 years, has been increasing five times as fast as the population in bellwether California

It is the avant-garde of the litigant spirit that is most unsettling. If one can blame the Government for a lightning strike and a corporation for a wind gust, it is easy to imagine tracking almost any mishap to some distant agency. Should owners of property on which there is a public passageway prohibit barefoot pedestrians or else assume liability for every stubbed toe? Must the manufacturer of a knife clearly label it as dangerous or else be vulnerable to damages for a kitchen worker's sliced finger? Could the designer of a dam be blamed if a voluntary swimmer drowned in a lake thus created?

The sue-if-possible attitude seems oddest when it crops up among those who freely—and deliberately—take risks. Surely the thrill of skiing is provided partly by the possibility of a spill. Just as certainly, the wilderness camper who beds down in grizzly-bear country is not expecting wall-to-wall safety. Yet skiers who fall have tried to hold slope owners liable for their injuries (a verdict awarding $1.5 million to a Vermont skier was upheld by the State Supreme Court), and outdoorsmen who camp in the vicinity of Yellowstone National Park's bears are, when attacked, trying to lay the rap on the Park Service. A camper received leg wounds from one of the bears against which the park constantly warns with signs, brochures and general publicity; the victim argued that the Park Service was negligent not to warn more sternly, more thoroughly, more precisely. The Government won that case, but an $87,417 judgment to another victim, who had been illegally camping in the park, was set aside only on appeal.

LARRY ROSS FOR TIME

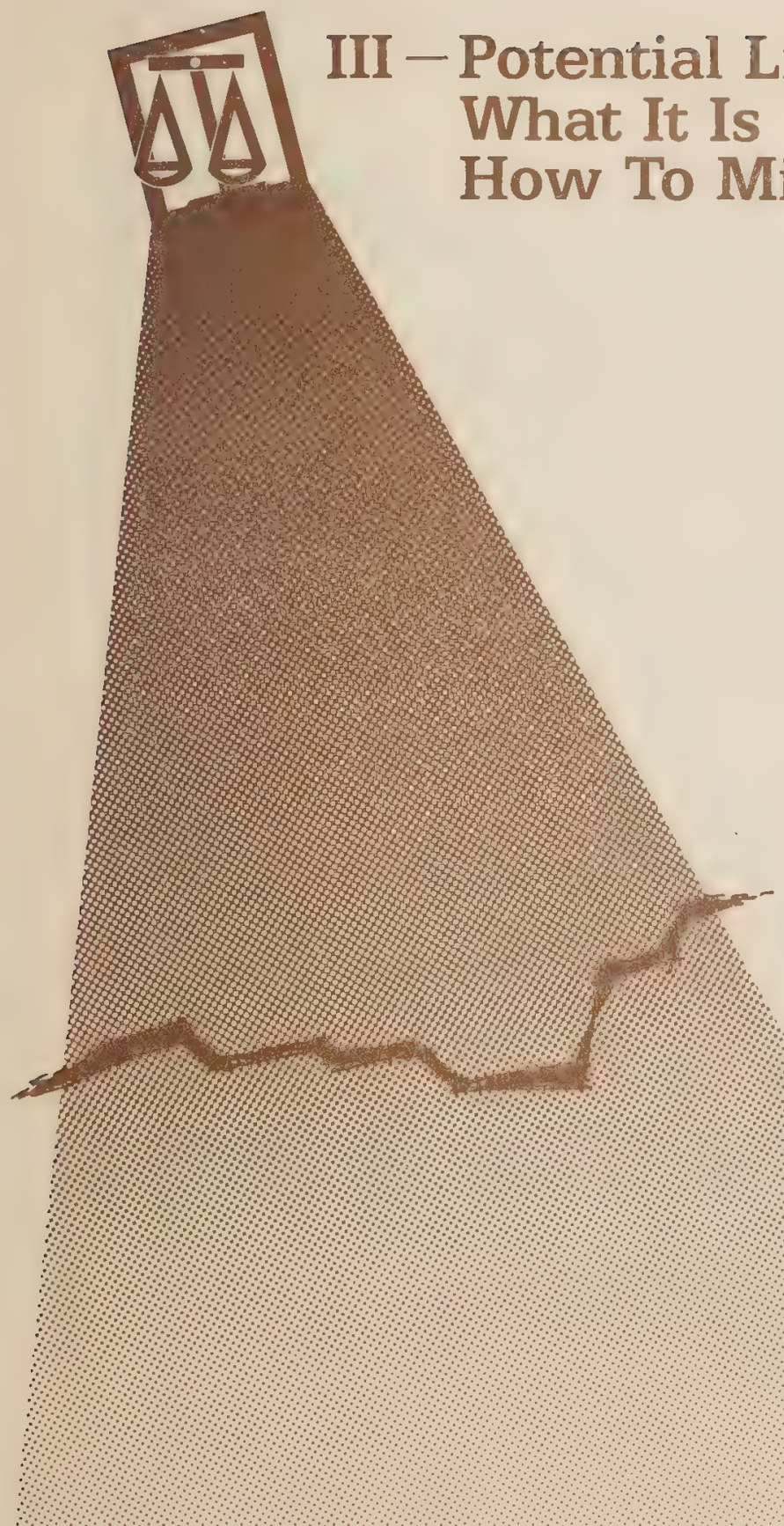
The increased tendency of injured parties to sue somebody -anybody has several roots. One is a heightened public awareness that government agencies, private companies and individuals are vulnerable to lawsuits, and that juries too often are overly generous. The publicity given to big awards awakens greed. Says Colorado State Senator Ray Kogovsek: "People read about these enormous settlements and they think, 'If this person got so much, maybe I have a right to that much too.' " Years of activist consumerism have also made people more alert to possible claims against institutional America. The act of suing, in short, has become less personal, and when the defendant is an institution, people do not suppose anybody is getting hurt. But as high insurance rates and doctors' bills attest, a damage payment that hurts nobody is as rare as a truly free lunch.

The modern welfare state is a monument to man's flight from risk. Yet even its considerable list of assurances—against unemployment, disability, blindness, lost bank funds, starvation—amounts to only a fraction of the protections available to Americans. Courts in California have held not only barkeeps but party hosts liable for injuries caused by drunken customers or guests. In the light of an abundance of other social cautions, one can almost imagine that the Oklahoma legislator was serious in proposing the bill, happily defeated last winter, that would have required a woman to obtain a written agreement as a legal precondition for sexual intercourse

In both its public and private spheres, the nation is rightly acting to reduce many of the risks that people have no choice but to hazard—on the road, in factories, in the natural environment, even in the field of speculative finance. But plainly, the spreading eagerness to avoid all risks and to find culprits for all injuries is going too far. The attitude rests on a refusal to to accept fate or personal folly as the real source of many of life's bumps. It is as if society is beset by the utopian dream of a world that is free, if not of risks, then of all individual responsibility for those taken and lost.

The sort of world in which some vague higher authority is expected to prohibit individuals from going any place where they might get blown by the wind or struck by lightning would be a world bereft of true freedom. If it could be contrived, such a world would be fraught with severe risks for the human spirit. For, as Psychologist William James said at the turn of the century: "It is only by risking our persons from one hour to another that we live at all."

— *Frank Trippett*



III — Potential Liability: What It Is and How To Minimize It.

A careful review of statutory law and relevant cases in California and several other States indicates numerous potential sources of local government liability for failure to reduce known or suspected earthquake hazards. This is cause for concern, but not panic. The research reveals that carefully conceived hazard reduction programs will reduce not only hazards, but potential liability as well. It is also clear that, independent of what a jurisdiction is doing (or not doing) to reduce hazards, there are legal and administrative strategies by which local governments can minimize their potential liability. This section advises local government about their potential liability, and recommends strategies for minimizing it.

Local government liability for failure to reduce earthquake hazards is most likely to occur for one or both the following reasons:

A — Ignorance or misunderstanding of tort law;
B — Failure to do what is legally required or "reasonable" in specific situations.

POTENTIAL LIABILITY

AND HOW TO MINIMIZE IT

A **General knowledge** Inadequate understanding of certain key tort principles increases a local government's chances of liability.

Familiarize policymakers and administrative officials with major principles of tort liability. This can be accomplished through:

1 – periodic seminars by experts in governmental liability;

2 – regular review and discussion by elected officials and staff of liability suits pending against the jurisdiction;

3 – periodic discussions of important cases which have been decided by the courts.

Reasonableness "Reasonableness" is determined from the circumstances. For example, the foreseeability of the injury, the apparent magnitude of the risk, and the relative costs and benefits of action vs. inaction. What this means in practice is that a genuine effort to examine alternatives must be made.

Consider the case of a local government which acquires knowledge (actual notice) of a hazardous public building. It can respond in a variety of ways:

1 — mitigate the hazard immediately;
2 — develop a plan for mitigating the hazard within a reasonable time;
3 — alert users of the building to the hazard through some form of posting or disclosure of the danger;
4 — decide at a "policy level" that it cannot mitigate the hazard, after explicitly considering the danger;
5 — ignore the information about the danger;
6 — suppress the information about the danger.

Remember that in the earthquake situation, the reasonableness of a local government's behavior will be determined after the fact, i.e., after people have been injured or killed.

In the example alternatives, (5) and (6) would rarely be considered reasonable responses. Alternative (1) would always be reasonable, as would (2), if the plan were specific and implemented over a reasonable period of time. Alternative (3) might be reasonable depending upon the circumstances; (4), while it is an exercise of a discretionary nature, would have to be reasonable as a cost-benefit tradeoff, and additionally might require posting of a warning. Number (2) is the best course to follow if the hazard cannot be mitigated immediately. The need for warning should be considered here as well.

Statutory or mandatory duties Under present law, failure to comply with such duties imposed by State or Federal government constitutes a strong argument for liability. With regard to earthquake hazards the most likely sources of liability are mandates which are specific (e.g., no construction on or within a certain distance of an active fault) with which non-compliance clearly causes or contributes to the injury or

Ascertain and fulfill statutory or mandatory duties imposed by higher levels of government. They vary by state, but generally the duties most relevant to earthquake hazards relate to:

- building codes and standards;
- inspection, certification and permit requirements;
- environmental hazards and land use ordinances;

damage (e.g., a building built on or near the fault collapses).

More general policy or planning requirements, such as California's requirement that local governments prepare a seismic safety element for their general plan, are unlikely sources of liability.

Forgotten statutes and fallen statues . . . a case for liability.

Photo courtesy of U.S. Geological Survey.

- emergency and disaster planning requirements;
- dam failure evacuation plans.

POTENTIAL LIABILITY

Duties created by local enactment It is probable (though not certain) that a local government can create mandatory duties binding upon itself. Such duties may be the basis for liability and, under recent court cases, may nullify certain immunities related to issuance of permits or non-enforcement of laws.

For example, the cities of Los Angeles and San Francisco have enacted ordinances designed to eliminate hazardous parapets. Los Angeles has implemented its ordinance, while San Francisco has proceeded more slowly. Consequently, in suits over comparable injuries, San Francisco would be more vulnerable to liability due to failure to "reasonably" enforce their ordinances.

Other affirmative duties Non-legislative actions also can create affirmative legal duties. For example, a local government has no duty to issue an earthquake warning based upon an earthquake prediction issued from other credible sources. If it announces publicly that it will do so (thereby creating reliance), an affirmative duty may arise and with it more potential liability.

Discretionary immunity Failure to understand and use this important immunity can result in unnecessary liability. "How" a decision is made can be as important as the decision itself. Discretionary immunity applies to "basic policy decisions" which have a "planning" rather than "operational" character. The higher the level of the decision-maker the more likely that the immunity applies. Generally technical, professional and scientific decisions do **not** qualify because they are not "policy" decisions. In the earthquake context this disqualification is very important. It could apply to administrative decisions made by engineers, geologists, or building inspectors, for example.

To take advantage of the discretionary immunity, the decision-maker must have actually taken into account the relevant risks and benefits (that would be the subject of a suit) in making the decision.

AND HOW TO MINIMIZE IT

Use caution when enacting laws which may not be carried out. The creation of such "duties" can often be avoided by careful wording of enactments or by not passing them at all. With regard to wording and intent:

- permissive rather than mandatory language should be used ("may," not "shall"); in other words create a power, not an obligation;
- ordinances should be worded so as to target protection of the **general** public rather than a specific limited group;
- a disclaimer of liability in the local ordinance may be effective in the event of a later suit.

Avoid non-legislative actions which create affirmative duties which cannot be met.

Develop and implement strategies for maximizing discretionary immunity. This means that:

- **Decisions about earthquake hazard reduction should be made at a high policy level (elected officials or top administrative staff).**
- **Decisions should be made with explicit recognition of the potential hazard.** This is important because a decision *not* to repair or replace a hazardous public facility, if made with tacit knowledge of the danger but without explicit recognition, would probably not be protected by the discretionary immunity. One way of facilitating a thorough examination of risks and benefits would be to require that consideration of earthquake hazards be included in environmental impact documents.
- **Decisions about earthquake hazards should be incorporated into the jurisdiction's risk management program.** Risk management is very consistent with the "explicit consideration of risks and benefits" requirement for discretionary immunity.

POTENTIAL LIABILITY

AND HOW TO MINIMIZE IT

B **Dangerous conditions of public property** Local government has a responsibility to maintain public property in a safe condition. The most obvious and likely sources of liability are injuries or damages sustained in or on property owned by the local government which are caused by a "dangerous condition" of the property. Many local governments have public buildings in daily use which could be hazardous in a foreseeable earthquake — hospitals, city halls, jails, courthouses, etc. If there are injuries and damages in such buildings during an earthquake, the local government would be liable if:

- the dangerous condition is serious (not trivial);
- the danger exists when the property is used with "due care" in the manner intended (e.g., no liability for skateboarding in the courthouse);
- the local government knew or should have known about the condition, or the condition was caused by negligence of a public employee;
- the local government's actions after hearing of the danger were negligent or unreasonable in light of the facts.

"Many local governments have public buildings in daily use which could be hazardous in a reasonably foreseeable earthquake . . ."

Photo courtesy of Bonilla, U.S. Geological Survey.

A general observation Minor or moderate earthquakes are more likely to result in local government liability than great earthquakes: firstly because they are more frequent and therefore more foreseeable; secondly because they are more likely to cause extensive damage or injury **only** in buildings and locations that are obviously hazardous. In other words, the more blatant the hazard and the more moderate the earthquake, the higher will be the chances of liability.

1 — **Within budgetary constraints, establish a regular inspection program to discover hazardous conditions on the local government's own property.** Some local governments have avoided such programs because acquiring knowledge (actual notice) creates a duty to act. This policy is unwise. The lack of an inspection policy would be an important pro-liability argument in establishing that the local government should have known (constructive notice) about the hazard. A local government with a reasonable inspection system, which happened not to discover a particular injury-causing hazard, would be more protected against liability than one with no inspection program at all.

The inspection program should give priority to high occupancy facilities with involuntary and dependent occupants (jails, hospitals, schools, nursing homes, public housing, etc.).

2 — **Once dangerous conditions are detected, establish and implement a plan for disclosing and/or mitigating the hazards.** The local government may choose whether or not to mitigate the hazard, but in doing so it must act reasonably. Its decision will be judged by taking into consideration the time and opportunity it had to take action, and by weighing the probability and gravity of potential injury to persons and property against the practicality and cost of protection against such injury.

POTENTIAL LIABILITY

A provision in California law immunizes governments for negligence in the **design** of public buildings and facilities. Two 1972 court cases (*Baldwin v. State of California* and *Cameron v. State of California*) seem to have seriously eroded that immunity. In the former the court held that government could be liable for failing to take into account "changed conditions or circumstances" which made a previously safe design dangerous. In *Cameron*, the government was held liable for failure to post a warning of the danger posed by the outdated design.

While both of these cases involved highways, it is probable that they apply to other types of public facilities. It is unclear how broadly "changed circumstances" will be interpreted. Could it include, for example, new structural or seismological information?

AND HOW TO MINIMIZE IT

3 — **(California only) Become familiar with the design immunity and its recent court interpretations.** To successfully use the design immunity, a local government must be able to show that:

- its decision was of a discretionary, policy nature and was reasonable at the time;
- the design feature in question (and its associated costs and risks) were considered explicitly;
- the public and users were adequately warned of the danger.

While there is still some uncertainty about the implications of these decisions, the basic sense of the rulings is that government has a duty to review the adequacy of its design decisions. A safe course of action for local governments to follow when such information (e.g., a newly-discovered fault) becomes available, is to review the designs of their affected public faciities and **document the results.**

"It is unclear how broadly "changed circumstances" will be interpreted. Could it include, for example, new structural or seismological information?"

Photo courtesy of Minakami, U.S. Geological Survey.

POTENTIAL LIABILITY

Less obvious sources of liability than public buildings are **public right-of-ways** (e.g., streets, sidewalks) which could become hazardous in an earthquake due to parapets or cornices falling from private buildings. It is not clear to what extent the courts will hold local governments liable for public property made dangerous by adjoining private property, although several cases indicate they might. Several factors could contribute to liability:

- local government knows about specific hazards and does nothing (actual notice);
- the problem is so obvious that local government should know (constructive notice);
- the cost of mitigation is low compared to the total cost of the building and safety benefits (reasonableness);
- the local government has an ordinance calling for repair or removal of the hazards (mandatory duty) and has not enforced it reasonably.

"It is not clear to what extent the courts will hold local governments liable for public property made dangerous by adjoining private property . . ."

Photo courtesy of U.S. Geological Survey.

AND HOW TO MINIMIZE IT

4 — **Determine if public right-of-ways (e.g., sidewalks and streets) or other public properties are made dangerous by hazardous parapets, cornices, or other appendages on adjacent private structures.** The range of possible local government actions include doing nothing, repair/removal, posting the hazard, traffic diversion in exceptionally dangerous situations, etc. The key criterion in deciding what to do is reasonableness. If a dangerous condition is allowed to remain, warning the public of its existence would be a minimum.

POTENTIAL LIABILITY

Hazardous private property Local governments have much less potential liability for injuries on private property than on public property. If a local government discovers a hazard on private property (e.g., through a building inspection) it must inform the owner and **follow through** with any other explicit mandates of state or local law. Within these mandates local governments in some states could be liable for negligent building inspection or permit issuance, or failure to enforce codes and ordinances. **In most states, courts have been unwilling on the whole to make local government liable in such instances.** Some states, like California, Utah, and most recently Alaska, have specific immunities to cover the above problems. This issue, however, is confused in California. In the *Morris v. Marin County* case, the county was held liable for failing to enforce a law. The court decided that a mandatory duty existed which superseded the specific immunity in the Tort Claims Act.

To summarize, local governments in most states will not be held liable for injuries in a private structure unless they were directly caused by local government or by violation of a legal duty.

"Local governments have much less potential liability for injuries on private property than on public property."

Photo courtesy of U.S. Geological Survey.

AND HOW TO MINIMIZE IT

1 — **Follow through on code violations and non-compliance revealed by inspection.** This is especially important in states without a tort claims statute which gives immunity for negligent inspections and permit issuance.

2 — **Enforce State-mandated building codes.** In some states, local governments are assigned, through possibly mandatory language ("**shall** enforce"), the responsibility for administering building codes and regulations. Even if the State is lax in its enforcement, the "shall" language could have critical legal significance, according to legal experts. Local government's defense against charges of non-enforcement would rely on the reasonableness criterion (assuming no immunity applies), i.e., there has been a reasonable, good faith effort.

3 — **Enforce the provisions of the Alguist-Priolo Special Studies Zones Act (California).** Although land use decisions made by local government are generally considered discretionary, the Special Studies Zones Act imposes some ambiguous, possibly mandatory requirements. Strictly speaking, the law mandates only the preparation of certain geologic reports. It does not require that local government adhere to their findings. However, in a situation where people have been killed or injured and it can be proven that the jurisdiction acted contrary to geological findings, the local government may have difficulty defending the "reasonableness" of its actions.

POTENTIAL LIABILITY

Earthquake prediction and warning Local governments could be held liable for injuries or damages caused by their action or inaction in responding to an earthquake prediction and warning. Upon receiving advance notice of an earthquake, a local government might have to make numerous decisions at various policy and operational levels pursuant to an earthquake warning. Some states provide some immunities **if** the governor has declared a state of emergency. In the absence of such a declaration, however, there are no specific immunities. Therefore, local governments could find themselves liable. It is possible that some or all of the decisions would be considered discretionary — but this is not certain. This potential liability could inhibit and impede prompt decisive actions by local government in a situation where an earthquake is imminent.

AND HOW TO MINIMIZE IT

Make decisions about how to respond to an earthquake prediction or warning at the highest policy level, in order to maximize the applicability of the discretionary immunity.

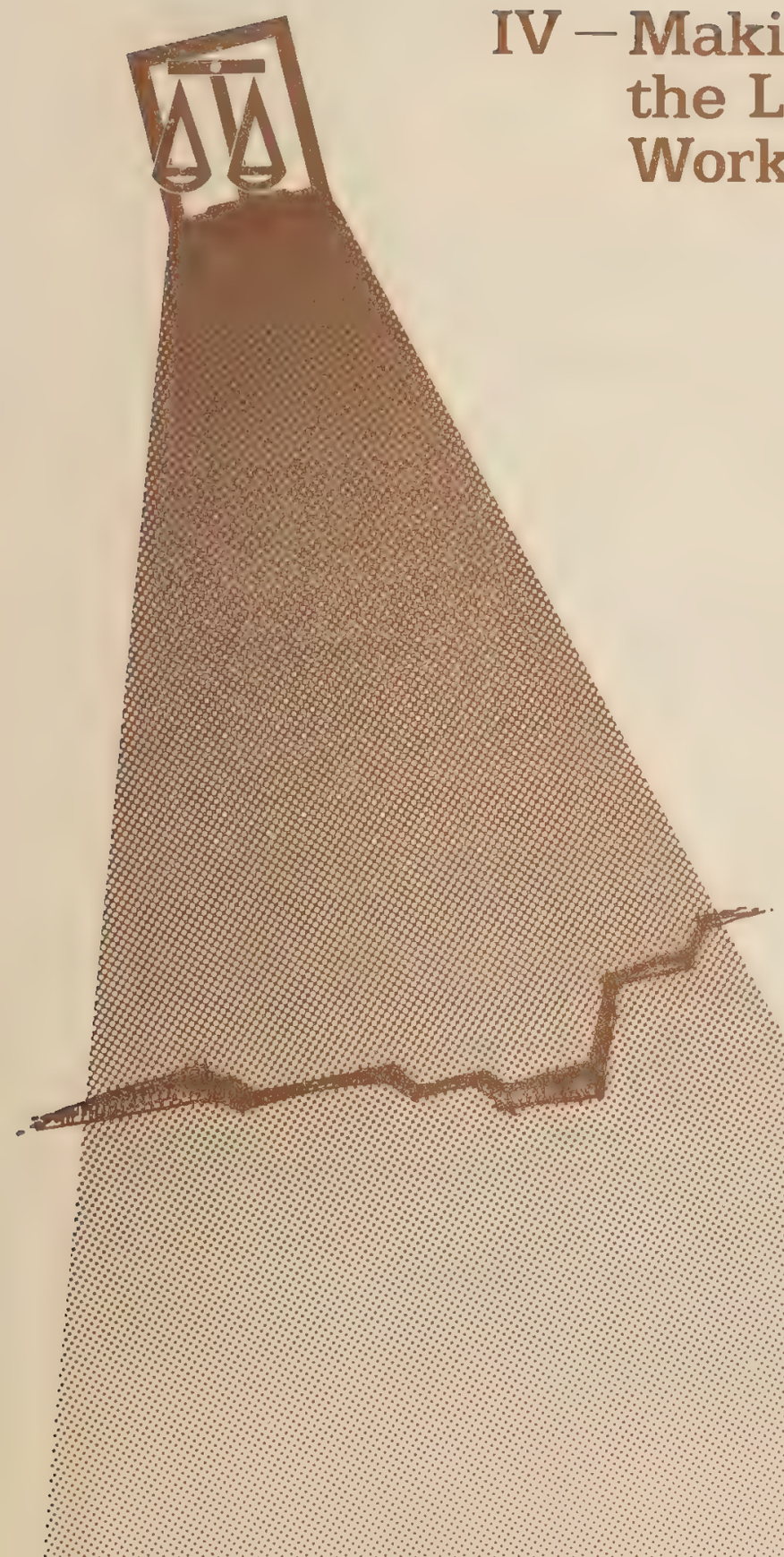
IN ADDITION . . .

Some additional ideas for minimizing liability and its impact:

1 — **Self-insuring local governments which know or suspect significant earthquakes hazards within their jurisdiction, and feel they have insufficient resources for mitigating them, should re-examine the wisdom of self-insurance.**

2 — **Investigate pooling arrangements for liability insurance against earthquakes hazards.** Ideally, a consortium would include jurisdictions with comparable seismic safety risks but which are geographically dispersed and thus unlikely to be hit by an earthquake at the same time.

3 — **Establish a modern risk management system.** Risk management, when integrated into the policy-making process, establishes precisely the kind of "careful consideration of risks and benefits" which is crucial to successfully claiming the discretionary immunity. It also provides a logical framework in which to decide about earthquake hazard reduction. For example, a local government sued over injury sustained in public facilities during an earthquake may be able to demonstrate that, given limited resources, it had to first mitigate the statistically most likely hazard, e.g., an airport flight path that carries passengers over highly populated areas every day.



IV — Making the Law Work Better

As the earlier discussion of tort law's impact on local government made clear, the law is not working as intended with regard to reducing earthquake hazards.

The law should be providing clear guidance and incentives to eliminate hazardous conditions. It is not. Rather it is having less impact than it could because it is perceived by local governments as uncertain and unpredictable; and when it does influence their actions, that influence is often likely to discourage aggressive efforts to discover and eliminate hazards. Furthermore, these problems in the law will become exacerbated in the future as liability issues become more visible and important. Therefore it is important that efforts be made to correct these problems. Below are a series of policy recommendations to state governments which are designed to:

1 — **reduce** the amount of **uncertainty** about the liability consequences of certain actions;

2 — **eliminate** safety **disincentives** in the current law;

3 — **encourage reduction of earthquake hazards without increasing local goverment's liability.**

The recommendations are organized as follows:

Recommendation — I

Legislation clarifying potential liability and reducing safety disincentives

A — Dangerous conditions of public property
- 1 — Identifying and mitgating hazards
- 2 — Proportionate liability

B — Hazardous private property
- 1 — Rehabilitation of old hazardous buildings
- 2 — Clarification of ''notice'' rules
- 3 — Proportionate liability

C — Earthquake prediction and warning
- 1 — Immunity for issuance or non-issuance
- 2 — Immunity for action (or non-action) based on prediction or warning

Recommendation – II (California only)

An Attorney General's opinion clarifying the law :

A — Can local enactments create mandatory duties?

B — Can new information about earthquake hazards constitute "changed circumstances"? (as defined in *Baldwin v. State of California)*

Recommendation – III

Appropriate state agencies should examine the feasibility of state matching grants to reduce hazards in high occupancy public structures.

Recommendations to State Governments

Intended Impacts

Recommendation – I

State legislation should be enacted which clarifies local government's potential liabilities arising from earthquakes, and reduces tort law disincentives to reduction of earthquake hazards. Major components of this legislation are described below.

- reduce uncertainties about potential liabilities;
- encourage local governments to discover and mitigate earthquake hazards on public property.

A – Dangerous Conditions of Public Property

1 — The legislation would require the State, within one year, to notify local governments (general purpose and other local public entities) whether they are located wholly or partly in an area of significant seismic risk. Prior to such notification, local governments would be immune from liability for personal injuries, death or property damages caused in an earthquake due to dangerous conditions of public property. After such notification:

- **local governments NOT in a seismically hazardous area** would retain this immunity;
- **local governments which ARE in a seismically hazardous area** could retain this immunity if they met the following requirements:
  a) Within one year inspect all their publicly-owned properties included in an area of seismic risk for the purpose of deter-

A possible alternative to recommendation A-1, which merits further study, would be legislation requiring the State to establish voluntary earthquake liability insurance. This would be available to local governments at no cost if they met the types of hazard mitigation conditions outlined above.

Recommendations to State Governments	Intended Impacts
mining whether any of such properties pose a potential hazard to life or privately owned property as a result of an earthquake; b) Within one year after completing the inspection of public properties, adopt a plan to mitigate the hazards identified in the inspection program. Specific mitigation measures and their timing would be established by the local governments; and c) Thereafter, the local governments must be in a reasonable compliance with their adopted mitigation plans.	
2 — The legislation would provide that where a local government is held liable for injury or damage sustained in an earthquake due to a dangerous condition of public property caused by the condition of adjacent private property (e.g., a private parapet falling on a public sidewalk), the local government's **liability would be limited in direct proportion to its share of the negligence** causing the loss. Note: In legal terms this would mean abandonment of the rule of joint and several liability among concurrent tortfeasors in favor of a rule of several liability as to local defendants in such cases.	● reduce disincentives by discouraging irresponsible claims against the "deep pocket" of local government.

B — Hazardous Private Property

1 — To encourage the voluntary rehabilitation and improvement of older buildings, the legislation would provide that a local government may adopt an "earthquake life-safety standard" less rigorous than the currently applicable building code. Its purpose would be to reduce the chances of personal injury in such buildings, not to minimize property damage. A local government would have no liability for personal injuries, death or property damages sustained as a result of an earthquake in or because of such rehabilitated buildings by reason of the local government's adoption and enforcement of such earthquake life-safety	● encourage reduction of earthquake hazards in older, marginally economic buildings.

Recommendations to State Governments	Intended Impacts
standards. There would be specific minimum standards similar to those recommended by the California Seismic Safety Commission.	
2 — The legislation would provide that actual or constructive notice of a dangerous condition of private property cannot be a source of local government liability for injuries or loss caused by an earthquake unless: a) the injury was caused by a failure of the local government to comply with a statutory or mandatory duty; or b) the injury occurred on public property which was dangerous because of a known dangerous condition of private property (e.g., private parapet falling on public sidewalk).	• reduce uncertainties regarding potential liability; • reduce disincentives to local government discovery of earthquake hazards on private property.
3 — The legislation would provide that where a local government is held liable for injury or damage sustained in an earthquake on **private property,** the local goverment's **liability would be limited in direct proportion to its share of the negligence** in causing the loss. Note: In legal terms this would mean abandonment of the rule of joint and several liability among concurrent tortfeasors in favor of a rule of several liability as to local government defendants in such cases.	• reduce disincentives by discouraging irresponsible claims against the ''deep pocket'' of local government.

C — Earthquake Prediction and Warning

1 — The legislation would provide that state[8] and its agencies would be immune from liability for personal injuries, death or property damages including injuries to commercial and business interests caused by the issuance or non-issuance of an earthquake warning or prediction; or any acts of omissions in the fact-gathering, evaluation and other activities leading up to issuance or non-issuance of such a warning or prediction.	• reduce uncertainties about potential liability; • reduce potential liability of local government.

[8]In California this would mean the Governor and all members of the California Earthquake Prediction Evaluation Council.

Recommendations to State Governments	Intended Impacts
2 — The legislation would make it clear that a ''state of emergency'' can be declared by authorized state or local officials based on a credible earthquake prediction or warning. Furthermore, such a declaration would provide State and local governments with the immunities provided in the California Emergency Services Act.[9].	● reduce disincentives to a prompt and effective governmental performance in response to an earthquake prediction or warning.

Recommendation — II (California only)

The State Attorney General should issue clarifying opinions on the following:

A — Whether or not a local government's own enactments can impose mandatory duties upon the local government and/or other public entities located within its jurisdiction.

B — Whether or not new information received by a public entity about earthquake hazards to public property can constitute ''changed circumstances'' within the rule of *Baldwin v. State* (6 C 3d 424; 99 Cal. Rptr. 145).

● reduce uncertainty.

Recommendation — III

Appropriate state agencies should examine the feasibility of a long-term capital improvement program to reduce earthquake hazards in certain public structures and facilities. These would include high occupancy structures, lifelines, buildings occupied involuntarily or by partially dependent populations (e.g., schools, hospitals, jails, courthouses), and critical or emergency facilities.

Through matching grants, the state would provide 90% of the funding necessary to reduce the hazards.

● accelerate reduction of earthquake hazards in public structures.

This study's conclusions about local government's potential liability underline the deepening financial dilemma of local governments. The trend toward holding government more liable for its actions reflects a belief in expanded government responsibility. The "taxpayer revolt" reflects a desire to have government spend less and (maybe) do less.

In order to reduce their potential liability (i.e., to reduce the vulnerability of the public purse) local government should be employing certain strategies and making genuine efforts to discover and reduce hazards. Doing the latter can be an expensive proposition especially in the large, older cities. Doing this job over a reasonable period of time means that states will have to provide financial assistance and incentives to local government.

[9]California Government Code Sections 8550 et sec, Civil Code 1714.5. A copy is in the *Legal References on Earthquake Hazards and Local Government Liability*.

San Francisco after the 1906 earthquake.
What is left of a newly constructed
city hall can be seen in the upper right.

Other publications from ABAG's Earthquake Preparedness Program

- Land Capability Analysis For Planning and Decision Making (February 1976)
- Hazards Evaluation For Disaster Preparedness Planning (February 1976)
- Regional Earthquake Safety Issues and Objectives (February 1977)
- Earthquake Insurance Issues (September 1977)
- Earthquake Intensity and Expected Cost (February 1978)
- Legal References on Earthquake Hazards and Local Government Liability (December 1978)
- Attorney's Guide to Earthquake Liability (February 1979)

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